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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

MUSSER, BARBARA J

ART UNIT PAPER NUMBER

1733

DATE MAILED: 11/05/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/633,032

Applicant(s)

MEUWLY ET AL.

Examiner

Barbara J. Musser

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 and 28-49 is/are pending in the application.
- 4a) Of the above claim(s) 28-49 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of group I in Paper No. 6 is acknowledged. The traversal is on the ground(s) that injection molding would form a different product. This is not found persuasive because due to the thinness of the layers, the fibers would appear to be directly on top of each other. Thus they could be stacked in a mold in the same relation. In any event, the process would be used to make a different product such as one with a thickness greater than 0.3 mm per sheet with a different hardness.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 2, it is unclear what is meant by developable. The portion of the specification applicant points to does not disclose a meaning of developable, but states such a surface makes it easier to fit the lengths against it. Additionally, the word, from a cursory search, appears to relate to a type of surface formed mathematically, which is quite different from a surface which can be flattened.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4, 7-9, and 12-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walsh et al. in view of Breitigam et al.

Walsh et al. discloses impregnating thermosetting resin into long parallel reinforcement fibers, partially curing the resin using ultraviolet radiation to form moldable prepregs, forming the prepregs into an article, and curing the article.(Abstract, Col. 2, ll. 17-Col. 3, ll. 2; Col. 10, ll. 12-23) The reference is silent as to the specifics of the final molding process, stating only that suitable techniques and parameters for molding the prepregs would be readily apparent.(Col. 11, ll. 58-66)

The reference does not disclose taking lengths of the prepreg and applying them to a nonplanar support by stacking to form a stack of stressed lengths. Breitigam et al. discloses it is well-known and conventional in the molding arts to form an article by stacking strips of prepreg on a shaped mold and curing them to form an article.(Col. 1, ll. 40-55) It would have been obvious to one of ordinary skill in the art at the time the invention was made to mold the prepregs of Walsh et al. using the molding technique of the admitted prior art of Breitigam et al. since this is a conventional technique used to mold fiber reinforced sheets(Col. 1, ll. 40) particularly since Walsh et al. is forming a prepreg which can be used in conventional processes.

While the references do not specifically state the prepregs are fitted snugly against each other and the support, one in the art would appreciate that the prepregs would be fitted snugly against each other to prevent gaps which would reduce the strength of the final product as is known in the art. The references also do not specifically state the mold is nonplanar. However, one in the art would appreciate that any type of mold could be used dependent on the final intended product shape, and that it would have been obvious to use a nonplanar mold when forming a nonplanar article.

Regarding claims 2-4, 7-9, and 12-23, the rejections are as set forth in the previous office action.

6. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walsh et al. and Breitigam as applied to claim 1 above, and further in view of Cook et al. as set forth in the previous office action.

7. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walsh et al. and Breitigam as applied to claim 1 above, and further in view of Armstrong as set forth in the previous office action.

8. Claims 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spragg et al. in view of Markow and Walsh et al. as set forth in the previous office action.

Response to Arguments

9. Applicant's arguments filed 9/12/02 have been fully considered but they are not persuasive.

Regarding applicant's argument that Walsh et al. does not consider the reactivity of the partially cured surface and that there is no guarantee it would be capable of bonding to adjacent prepregs, applicant does not require the prepregs to bond directly to each other. For example in claims 12 and 14, material is placed between the prepregs to temporarily bond them together. As this material is not removed, the prepregs do not bond directly to each other so a specific reactivity of the prepreg surface is not required. Additionally, the use of B-stage fiber impregnated layers as adhesive layers is well-known and conventional in the molding arts. Finally, the layers of Walsh et al. are formed of the same materials as applicant's under the same conditions and thus would have the same reactivity.

10. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., creating an maintaining a reactive surface) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Applicant suggests that the process of Walsh et al. does not form a reactive surface. It is suggested that the specific conditions necessary to create and maintain the reactive surface so that the prepregs bond to each other be added to the claim, since currently all the specifics of the materials and conditions that are claimed are present in Walsh et al.

Regarding applicant's argument that Breitigam discloses the problems of the admitted prior art, simply because a reference has created a new way to make a product does not mean the old way is not obvious.

Regarding applicant's argument that neither Walsh et al. or Breitigam discloses a nonplanar support or stacking lengths of material on a nonplanar support, applicant appears to be arguing that the use of a nonplanar support versus that of a planar support is not obvious. Breitigam et al. is silent as to the shape of the support, simply stating nontrivial shapes have been prepared. The phrase nontrivial includes nonplanar shapes. Additionally, one in the art would appreciate that the shape of the final article would dictate the shape of the mold and that curved mold surfaces would be used when a curved article was intended to be formed. Absent unexpected results for placing the unidirectional preregs on a nonplanar surface, it is considered obvious.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Barbara J. Musser** whose telephone number is **(703)-305-1352**. The examiner can normally be reached on Monday-Thursday; alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



BJM

November 4, 2002



Michael W. Ball
Supervisory Patent Examiner
Technology Center 1700